



# Individual cognitions as antecedents of emotional competence and job satisfaction

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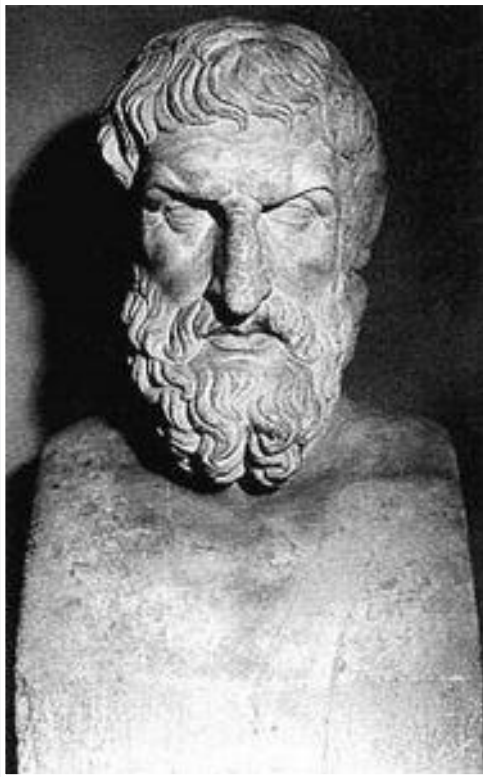


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*„It is not the things themselves  
that disturb people but their  
judgements about  
those things.“*

Epictetus (50-138)



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## Central assumption of appraisal theories:

Emotions are elicited and differentiated on the basis of a person's *subjective evaluation* or appraisal of the personal significance of a situation, object, or event on a number of dimensions or criteria.

Scherer (1999)



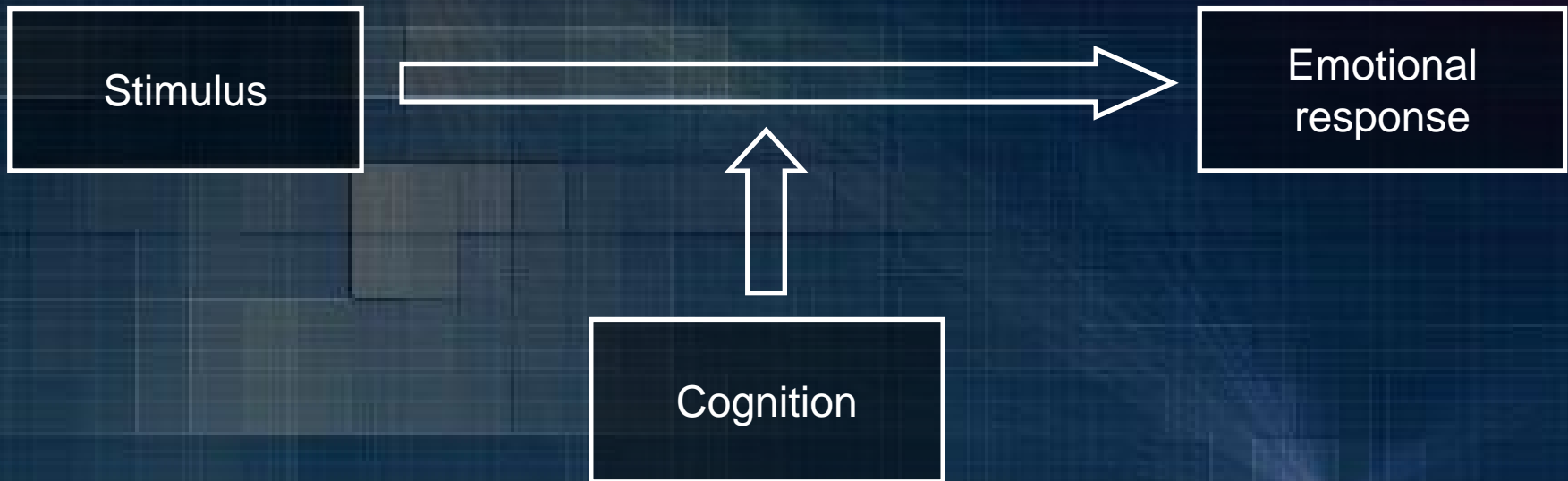
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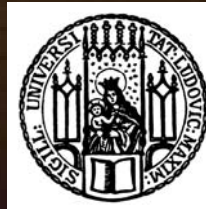
**In short:** Cognitions about stimuli *determine* emotional reactions to these stimuli.





## What's new here:

1. We want to look at a *special kind* of cognitions, namely **irrational beliefs**.
2. We argue: Some aspects of these emotional reactions can also be classified as aspects of **emotional competence** (e.g., emotion control)

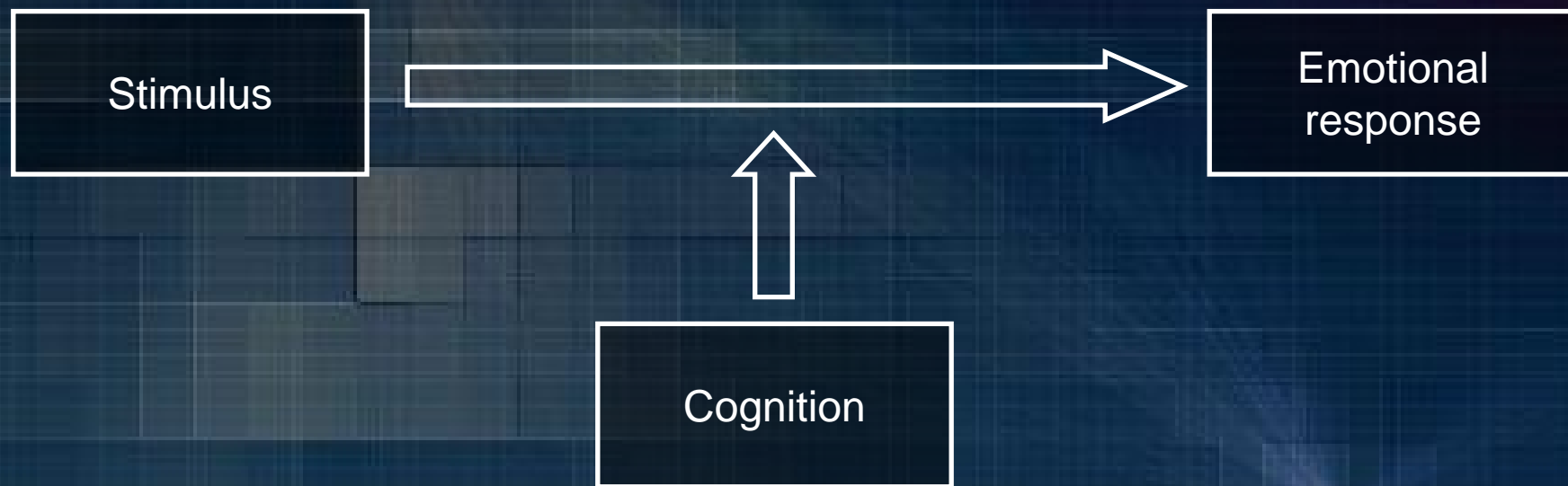


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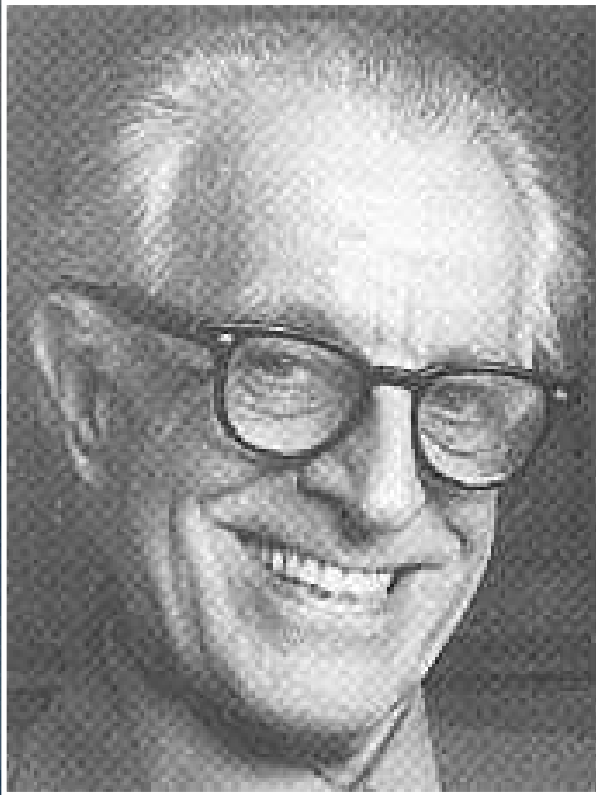


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*„Irrational beliefs  
significantly contribute  
to or cause emotional  
and behavioral  
disturbances.“*

Albert Ellis (\*1913)

Founder of Rational-Emotive-  
Behavior Therapy (REBT)



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# What are irrational beliefs?



## Characteristics of irrational beliefs:

- Rigid
- Unrealistic
- Illogical
- Absolutistic
- Not falsifiable
- Include valuation of the person



A central irrational belief:

**I absolutely have to be successful, otherwise I am a worthless person.**

(Achievement situations)

Another irrational belief (Ellis collected 12):

**You have no control over your emotions and you are not responsible for your feelings.**

(Emotional control)



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# The modification of these linked irrational ideas is the central aspect of Rational-Emotive-Behavior Therapy (REBT)

And it works!

Engles, G. I., Garnefsky, N & Diekstra, F. W. (1993). Efficacy of rational-emotive therapy: A quantitative analysis. Journal of Consulting and Clinical Psychology, 6, 1083-1090.

Grawe, K., Donati, R. & Bernauer, F. (1994). Psychotherapie im Wandel. Von der Konfession zur Profession. Göttingen: Hogrefe.

Lyons, L. C. & Woods, P. J. (1991). The efficacy of rational emotive therapy: A quantitative review of the outcome research. Clinical Psychology Review, 11, 357-369.



## Summary:

- Cognitions are determinants of emotional reactions, i.e. emotional experience and emotion management (confirmed)
- Emotional control is a central aspect of emotional competence/intelligence (definition/confirmed)
- Irrational beliefs as specific cognitions are supposed to lead to reduced emotional control (theoretically postulation/no test so far)



## Assumptions:

- Irrational beliefs might be connected with reduced emotional competence
- Irrational beliefs might have an explanatory value in explaining individual differences in emotional competence.





# Hypotheses:

- 1) When confronted with the same events irrational beliefs should result in reduced emotional competence whereas rational beliefs should foster emotional competence (tested in experimental scenario study [1])
- 2) Irrational beliefs should be associated with reduced emotional competence (tested in real-life correlational study [2])



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## Study 1

- Subjects: 113 persons (80 female, 33 male, average age of 31.2 years, ranging from 15 to 64)
- Method: Scenario studies using stimulus persons (placed in organizational context)



## Procedure:

- Respondents received three scenarios
- In every scenario the two stimulus persons were in identical situations:
  - Promotion (+)
  - Failure in constructing prototype (-)
  - Failing to manage team (-)
- **IV:** Only difference between stimulus persons: Rational vs. irrational beliefs



- **DV (1+2): Perception and modification** of emotional states based on
  - individual (other)
  - individual (self)
  - group level
- **DV (3): Identification** of the respondent with stimulus persons
- **Additionally:** Assessment of respondent's **job satisfaction** (Relevant aspect of rational thinking and emotional intelligence)
- **Assessment:** 11-point rating scales

	Perception		Modification	
	Rational	Irrational	Rational	Irrational
Situation 1: Promotion (individual emotions)	5.90	4.80	7.10	3.72
	$\underline{t}(111) = 2.59 \text{ } p < .05$ $\underline{d} = 0.25$		$\underline{t}(111) = 10.30 \text{ } p < 0.001$ $\underline{d} = 0.97$	
Situation 2: Prototype construction (own emotions)	6.83	3.40	7.95	2.70
	$\underline{t}(112) = 10.71 \text{ } p < .001$ $\underline{d} = 1.01$		$\underline{t}(110) = 22.38 \text{ } p < 0.001$ $\underline{d} = 2.12$	
Situation 3: Teamwork (group emotions)	7.00	3.33	7.43	2.71
	$\underline{t}(111) = 10.44 \text{ } p < .001$ $\underline{d} = 0.98$		$\underline{t}(110) = 13.79 \text{ } p < 0.001$ $\underline{d} = 1.30$	
Overall	6.58	3.83	7.28	2.93
	$\underline{t}(112) = 10.23 \text{ } p < .001$ $\underline{d} = 0.97$		$\underline{t}(112) = 18.11 \text{ } p < 0.001$ $\underline{d} = 1.70$	

*Effect size (Cohen, 1988):  $d = 0.20$  (small),  $d = 0.50$  (medium) und  $d = 0.8$  (large)*



## Identification and job satisfaction:

- The two [aggregated] indicators of identification (rational vs. irrational) correlated negatively ( $r = -.63$ ,  $p < .001$ ).
- Both variables correlated significantly ( $p < .005$ ) with respondent's work life satisfaction:  
Identification with the irrational person:  $r = -.28$   
Identification with the rational person:  $r = .29$ .

*Effect size (Cohen, 1988):  $r = 0.10$  (small),  $r = 0.30$  (medium) und  $r = 0.5$  (large)*





## Conclusion:

- Evidence, that **perception** and **management** of emotional states (on [self/other] individual and group level) as important components of emotional intelligence/competence are perceived to be influenced by irrational beliefs
- A person identifying her/himself with irrational thinking persons is less satisfied in (occupational) life, identification with rational thinking persons corresponds with increased satisfaction

**Limitation:** Although the use of scenarios is a valid and meaningful method of emotional assessment it does not provide data of real persons!





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## Study 2

- Subjects: 136 persons (94 female, 42 male; average age of 28.0 years, ranging from 18 to 73)
- Method: Correlational study



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## Measurement of personal variables:

- **Irrational Beliefs (IB, Försterling & Bühner 2003, 6 Items)**
- **Emotional Competence inventory (ECI, Boyatzis, Goleman & Rhee, 2000, 72 items)**
- **Emotional intelligence Scale (EIS, Wong & Law, 2002, 16 items)**

Boyatzis, R. E., Goleman, D., & Rhee, K. S. (2000). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory. In R. Bar-On & J. D. A. Parker (Hrsg.). The handbook of Emotional Intelligence: Theory, development, assessment, and application at home, school, and in the workplace (S. 343-362). San Francisco, CA: Jossey-Bass.

Försterling, F., & Bühner, M. (2003). Attributional veridicality and evaluative beliefs: How do they contribute to depression? Journal of Social and Clinical Psychology, 22 (4), 369-392.

Wong, C.-S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. The Leadership Quarterly, 13, 243-274.



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Additionally:

## **Occupational satisfaction (OS)**

- Identical to study 1: “How satisfied are You overall with your occupational life?”
- Rating scale ranging from 0 (“not at all”) to 10 (“very”)



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## Reliability:

- **Irrational Beliefs (IB): .63**
- **Emotional Competence inventory (ECI): .93**  
(relevant subscale [self management]: .80)
- **Emotional intelligence Scale (EIS): .82**  
(relevant subscale [regulation of emotion]: .88)

Tumasjan, A., Welppe, I., Stich, J., Spörrle, M. & Försterling, F. (2005). Empirical competence-testing: A psychometric examination of the German version of the Emotional Competence Inventory [Abstract]. In K. W. Lange, K.-H. Bäuml, M. W. Greenlee, M. Hammerl & A. Zimmer (Eds.), Experimentelle Psychologie. Beiträge zur 47. Tagung experimentell arbeitender Psychologen (p. 206). Lengerich: Pabst Science Publishers.

Welppe, I., Tumasjan, A., Stich, J., Spörrle, M. & Försterling, F. (2005). Emotional Intelligence and its consequences for occupational and life satisfaction – Emotional Intelligence in the context of irrational beliefs [Abstract]. In K. W. Lange, K.-H. Bäuml, M. W. Greenlee, M. Hammerl & A. Zimmer (Eds.), Experimentelle Psychologie. Beiträge zur 47. Tagung experimentell arbeitender Psychologen (p. 221). Lengerich: Pabst Science Publishers.



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## Results: Correlations

### Overall scales:

ECI – EIS: .41,  $p < .01$  (EIS always recoded)

IB – ECI: -.21,  $p < .05$

IB – EIS: -.19,  $p < .05$

*Effect size (Cohen, 1988):  $r = 0.10$  (small),  $r = 0.30$  (medium) und  $r = 0.5$  (large)*



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## Results: Correlations

### Subscales:

IB – ECI (self management) :  $-.23, p < .05$

IB – EIS (regulation of emotion):  $-.34, p < .01$

*Effect size (Cohen, 1988):  $r = 0.10$  (small),  $r = 0.30$  (medium) und  $r = 0.5$  (large)*





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## Results: Correlations

### Occupational satisfaction (OS):

IB – OS:  $-.34, p < .01$

ECI – OS:  $.16, p < .07$  (ns)

EIS – OS:  $.23, p < .05$

*Effect size (Cohen, 1988):  $r = 0.10$  (small),  $r = 0.30$  (medium) und  $r = 0.5$  (large)*



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## Results: Regression

### Occupational satisfaction (OS):

	<u>B</u>	<u>SE B</u>	<u><math>\beta</math></u>	<u>R<sup>2</sup>corr</u>
EIS	.48	.28	.16	
ECI	.20	.62	.03	
IB	-.93	.26	-.30**	<u>R<sup>2</sup></u> = .12

\*\* =  $p < .005$



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## Can these results be explained by **Common method bias (CMB)?**

“Based on theoretical considerations, one would expect that the measures of Construct A would be correlated with measures of Construct B. However, if the measures of Construct A and the measures of Construct B also share common methods, those methods may exert a systematic effect on the observed correlation between the measures. Thus, at least partially, common method biases pose a rival explanation for the correlation observed between the measures.”

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88* (5), 879-903.



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# ① Standard correlation

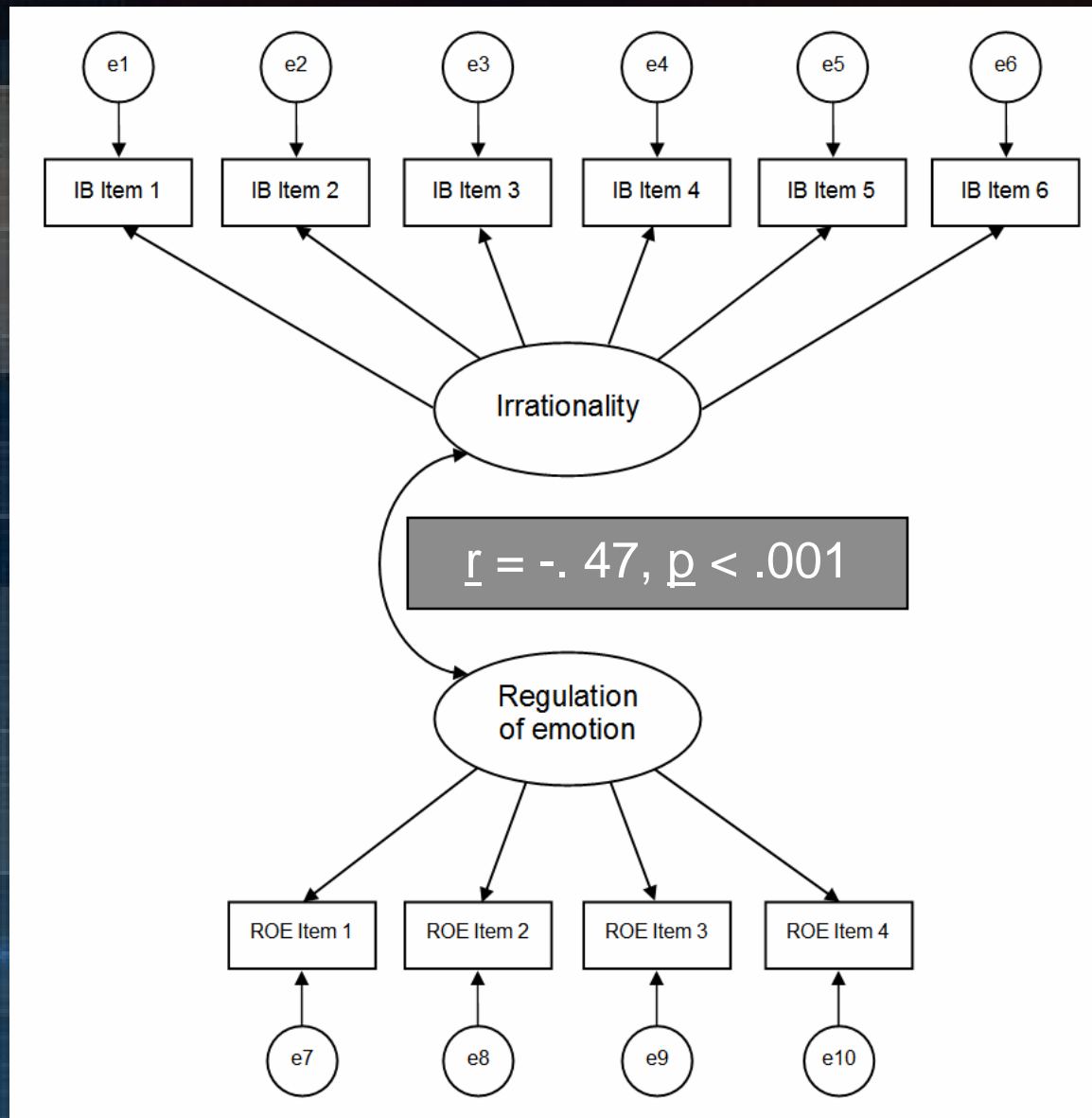
**IB**  
(mean value  
of six items)

$$r = -.34, p < .01$$

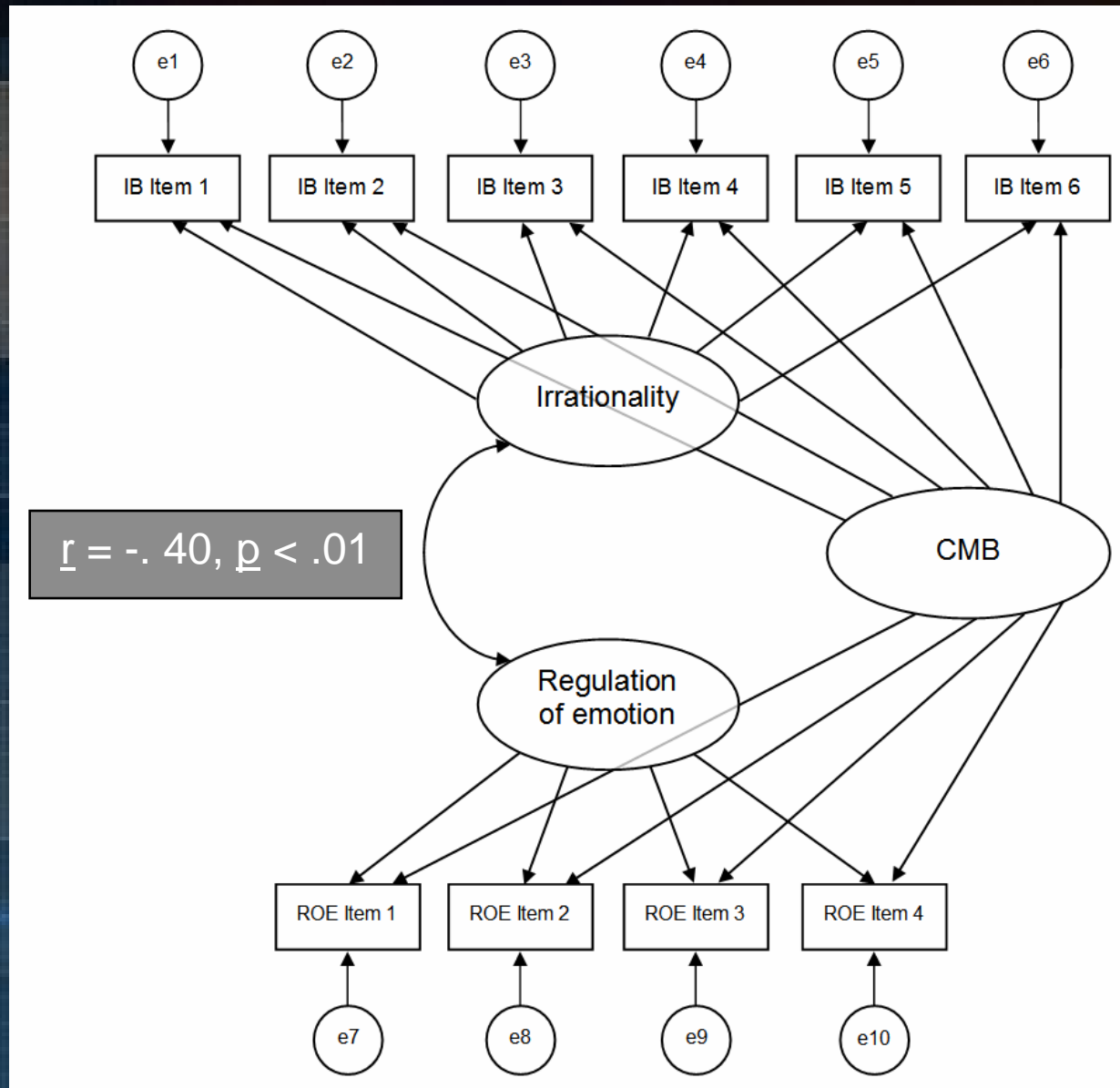
**EIS subscale**  
regulation of emotion (ROE)  
(mean value of four items)



## ② Structural equation modeling



### ③ Structural equation modeling (+ CMB)





## General results of SEM:

- From ① to ②: Obvious increase of correlation due to elimination of reliability problems
- From ② to ③: Slightly reduced correlation due to CMB
- From ② to ③: Increase in model fit (including CMB creates a better representation of the data)
- All correlations reported here remain significant



## Conclusions:

- Evidence of an interrelation between emotional control (as a central component of emotional competence) and irrational beliefs
- Emotional competence and irrational beliefs are related with occupational satisfaction; when using emotional competence and irrationality as predictors of satisfaction only irrationality remains significant
- Common method bias cannot offer an adequate complete explanation of these interrelations





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## Final conclusions:

- A connection between irrational cognitions and emotional competence (emotion control/regulation) can be demonstrated.
- Some evidence of cognitions as antecedents of emotional competence.
- Especially irrational beliefs (but also emotional competence) seem to be connected with job satisfaction.
- The use of scenario studies (stimulus person) and real person data did not result in contradicting findings.
- Common method bias cannot offer an adequate complete explanation of these interrelations.



## Further research questions:

- Will a reduction of irrational beliefs result in increased emotional competence?
- Are there additional cognitive components as antecedents of emotional competence?
- Why are rational thinking persons more satisfied? Do they actively change their environment or do they just perceive it differently?



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*An ignorant person expects  
good and bad to come from externals.*

*A philosopher expects  
good and bad to come from himself.*

*Epictetus*



# Thank You very much